

## Appendix F

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*Prescribed burning to improve habitat*

# Fire Management Program Guidance

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## Introduction

The U.S. Fish and Wildlife Service's (Service) Northeast Regional Fire Program (Fire Program) helps support the mission of the National Wildlife Refuge System (refer to chapter 1 of the draft CCP/EIS) by creating and managing important wildlife habitat with prescribed fire, and protecting human safety by reducing the risk of wildfire through fire suppression. This appendix outlines guidance for fire management, explains the fire management planning process, and describes the fire management program at Monomoy National Wildlife Refuge.

There are six wildfires (unplanned, human-caused ignitions) in wildland fuels documented for Monomoy NWR during the 60-year period from 1951 to 2011, ranging in size from less than 0.1 to 6 acres. No natural (lightning) ignitions are documented during that same 60-year period. Wildfire causes included two from signal flares from boaters in distress, one unattended campfire, one arson, one grass fire during cabin disposal, and one undetermined cause.

There are at least eight planned ignitions (prescribed fires) in wildland fuels documented for Monomoy NWR during the 60-year period from 1951 to 2011, up to 43 acres in size. Refuge personnel experimented with prescribed fire to provide green forage for fall and spring migrating waterfowl during the early 1950s. Burning for wildlife habitat was discontinued after the 1954 burns on a belief that the risk from erosion outweighed the forage benefits to migrating waterfowl and the logistical difficulties of applying fire in such remote, inaccessible areas during the few suitable weather windows available each year. The refuge resumed using fire as a tool for disposing of camps during the late 1960s, and continued this use through the early 1980s. Fire was absent as a habitat management tool at Monomoy until 2002, when two small vegetation management study plots were burned within the tern colony. During the period 2002 to 2009 there were three prescribed burns executed within the tern colony on South Monomoy, with the largest on October 15, 2009, when 36 acres of primarily beach grass was prescribed burned.

## The Role of Fire

Historically, natural fire and ignitions by Native American people played an important disturbance role in many ecosystems by:

- Removing fuel accumulations.
- Decreasing the impacts of insects and diseases.
- Stimulating regeneration of vegetation.
- Cycling nutrients.
- Providing a diversity of habitats for plants and wildlife.

In the heavily developed areas of the northeastern U.S., that role has been modified significantly. However, when fire is used properly it can

- Reduce hazardous fuels build-up in both wildland-urban interface<sup>1</sup> and other areas.
- Improve wildlife habitats by reducing the density of vegetation, or changing plant species composition.
- Sustain and increase biodiversity.
- Improve woodlands and shrublands by reducing plant density.
- Reduce the susceptibility of plants to insect and disease outbreaks.
- Assist in the control of invasive and noxious species.

<sup>1</sup> The wildland-urban interface is the line, area, or zone where human development and structures meet with undeveloped wildland or vegetative fuels.

## Wildland Fire and Management Policy and Guidance

In 2001 the Secretaries of the Interior and Agriculture approved an update to the 1995 Federal Fire Policy. The 2001 Federal Wildland Fire Management Policy directs Federal agencies to ([http://www.nwecg.gov/branches/ppm/fpc/archives/fire\\_policy/index.htm](http://www.nwecg.gov/branches/ppm/fpc/archives/fire_policy/index.htm)) achieve a balance between using fire suppression to protect life, property, and resources, and using wildland fire to regulate fuels and maintain healthy ecosystems. It also directs agencies to provide a management response to all wildfires that is commensurate with the values at risk, human safety, and the costs for suppression. This policy provides nine guiding principles that are fundamental to the success of the fire management program. These guiding principles are as follows:

1. Firefighter and public safety is the first priority in every fire management activity.
2. The role of wildland fire as an essential ecological process and natural change agent will be incorporated into all land management planning processes.
3. Fire management plans, programs, and activities support land and resource management plans and their implementation.
4. Sound risk management is a foundation for all fire management activities.
5. Fire management programs and activities are economically viable, based on values to be protected, costs, and land and resource management objectives.
6. Fire management plans and activities are based on the best available science.
7. Fire management plans and activities incorporate public health and environmental quality considerations.
8. Federal, State, tribal, local, interagency, and international coordination and cooperation are essential.
9. Standardization of policies and procedures among Federal agencies is an ongoing objective.

The following provide further direction on fire management decisions:

- Every fire requires a response and decision on how to respond to it.
- The Service's initial reaction to human-caused fires will be to suppress the fire while providing for firefighter and public safety, limiting damage and loss, and minimizing costs of the fire.
- The interagency nature of fire management work requires the involvement and participation of cooperators, including both State and local agencies, in planning for, and potentially responding to, wildland fire.

The Fish and Wildlife Service Fire Management Handbook provides standards for operational fire management activities, procedures, and practices based upon the above referenced current interagency, departmental, and Service policies (<http://www.fws.gov/fire/handbook/index.shtml>). The FWS Fire Management Handbook is updated annually to coincide with the Interagency Standards for Fire and Fire Aviation Operations Handbook and is incorporated by reference into the Service Manual (621 FW 1).

## Fire Management Planning

The Fire Management Plan (FMP) for the Eastern Massachusetts National Wildlife Refuge Complex defines the fire management direction for Monomoy refuge and other refuges in the complex based on the objectives outlined in the comprehensive conservation plans (CCP) and habitat management plans (HMP). The FMP follows the most recent Interagency Fire Management Plan Template and applies the most recent Service-specific guidance on use of that interagency template. It provides a detailed description of how the refuge will

- Respond to wildland fires.
- Manage fuels to reduce the risk of wildland fires.
- Use prescribed burning to meet management objectives, if applicable.

In order for a refuge to use wildland fire, prescribed burning, and other hazardous fuel reduction techniques, these methods must be specified and pre-approved as appropriate management responses in the refuge's FMP.

If none of these methods are described in the FMP, the refuge's only allowable response to wildland fire is aggressive suppression. An appropriate response must be determined for any unplanned ignition. The FMP must address a full range of potential responses to wildfires and outline the potential range of strategies and limitations and constraints on tactical operations, local approvals needed, etc.

An annual review process requires the refuge/unit line officer and servicing fire management officer to review the FMP using the annual review checklist, discuss and update FMP sections as needed, and complete an amendment containing any updates.

All prescribed fires must meet all Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide requirements.

## **Fire Management Program at Monomoy National Wildlife Refuge**

### **Fire Management Goals**

The goals and strategies of the National Wildlife Refuge System Wildland Fire Management Program Strategic Plan are consistent with Department of Interior (DOI), National Fire Plan direction, the President's Healthy Forest Initiative, the 10-year Comprehensive Strategy and Implementation Plan, National Wildfire Coordinating Group (NWCG) guidelines, initiatives of the Wildland Fire Leadership Council, and Interagency Standards for Fire and Aviation operations.

The current fire management goals for the refuge are to use prescribed fire to meet the habitat goals and objectives identified in this CCP.

### **Fire Management Objectives**

The purpose of the fire management program is to use prescribed fire, chemical, and manual and mechanical treatment to:

- Ensure public and firefighter safety while protecting property and natural resource values from wildfire.
- Reduce the wildfire impacts to all resource management activities. Reduce the threats associated with accumulations of hazardous fuel loads in marsh, coastal dune, and maritime woodland habitats.
- Provide and enhance and protect habitats for State and Federal endangered and threatened species and species of special concern.
- Provide, maintain, enhance, and protect nesting, brood, feeding, and resting habitat that meet the requirements of migratory birds and resident wildlife.
- Maintain health and vigor of marsh and coastal dune vegetation.
- Facilitate the control of invasive and exotic species.
- Increase habitat diversity in refuge upland habitats.
- Demonstrate and educate the public about the role and benefits of wildland fire protection and prescribed fire use in natural resource management.
- Maintain current ecosystem diversity within the landscape context.
- Comply with the State Air Quality Implementation Plan to protect public respiratory health and the environment.

### **Fire Management Strategies**

The refuge will use fire management strategies and tactics that consider public and firefighter safety, as well as resource values at risk. The FMP will provide a more detailed description of the wildfire suppression, prescribed fire, chemical, manual, and mechanical treatment methods the refuge plans to use. The FMP will also explain the timing and monitoring of the refuge's fire management strategies. The refuge will

develop prescribed fire burn plans for specific sites, following the interagency Prescribed Fire Planning and Implementation Procedures Reference Guide (2009) template.

Some fire management strategies techniques, such as prescribed burning, may impact air quality. Prescribed fire temporarily reduces air quality by diminishing visibility and releasing particulates and pollutants through combustion. However, the refuge will meet the Clean Air Act emission standards by adhering to the Massachusetts Air Quality requirements during all prescribed fire activities.

### **Fire Management Organization, Contracts, and Cooperation**

The Service's Northeast Regional Fire Program is divided into four fire management zones, which provide technical fire management oversight to refuges. Monomoy NWR is currently within the New England fire management zone, which includes all the national wildlife refuges in Massachusetts. The primary fire management staffing and support equipment are located at the Eastern Massachusetts National Wildlife Refuge Complex, and are shared among all units. All fire management activities are conducted in a coordinated and collaborative manner with the refuge and other Federal and non-Federal partners. The New England fire management zone has also developed a close working relationship with the Massachusetts Department of Fish and Game and The Nature Conservancy.

Upon approval of this CCP, a new FMP will be developed for the refuge. The FMP may cover only Monomoy NWR, or may cover all the refuges within the Eastern Massachusetts National Wildlife Refuge Complex.